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THE UNIVERSITY FRESHMAN DROPOUT.

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COLLEGE FRESHMAN DROPOUT CHARACTERISTICS WERE IDENTIFIED ALONG WITH THOSE IDENTIFIABLE TRAITS OF DROPOUTS WHO RETURNED TO COLLEGE. COMPARISONS WERE ALSO MADE BETWEEN THESE STUDENTS WHO DO NOT COMPLETE THE FIRST SEMESTER AND THOSE WHO DO. THE BASIS OF COMPARISON WAS ENTRANCE AND ACHIEVEMENT TEST DATA, FAMILY HISTORY, AND HIGH SCHOOL ACADEMIC AND EXTRACURRICULAR RECORD. ALL 1,500 FRESHMEN IN THE STUDY TOOK EITHER THE AMERICAN COLLEGE TESTING PROGRAM OR THE SCHOLASTIC APTITUDE TEST AT THE TIME OF ENTRY. IT WAS FOUND THAT THE DROPOUT GROUP ON ALL TESTS WAS SIGNIFICANTLY LOWER THAN THE NONDROPOUTS. THE DROPOUT GROUP AS A WHOLE SHOWED LESS COLLEGE APTITUDE AND LOWER GENERAL ACHIEVEMENT THAN THE NONDROPOUT GROUP, BUT THE EXTENT OF OVERLAP BETWEEN SCORE DISTRIBUTIONS OF DROPOUTS AND NONDROPOUTS IS SUFFICIENT TO SUGGEST THAT SOMETHING MORE THAN TEST-MEASURED CHARACTERISTICS CONTRIBUTED TO DROPPING OUT OF COLLEGE. (GD)

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The University Freshman Dropout

Cooperative Research Project No. S-038

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1965

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The University Freshman Dropout

Each year thousands of high school graduates enroll in colleges as entering freshmen, but before the end of the first term part of these enrollees have withdrawn from their studies and left the academic scene to merge into an increasingly large pool of undeveloped human resources. Several studies have looked at causes for college withdrawals, but none have intensively investigated this specific group of students--the freshmen who drop out before completing their first term, before receiving final marks for the initial term's work. What are they like? Do they leave the academic scene for all time, or do they return for additional college work at a later date? And if some return, how are they different from those who do not return?

The purpose of this study is twofold: first, to identify characteristics which are associated with dropouts, and second, to locate dropouts who return to college, and to identify traits which characterize these returnees.

The Problem. Specifically, the first problem of this study was to make comparisons between students who drop out of college in their first semester and students who complete that semester's work. The basis of comparison was entrance and achievement test data, family history, and high school academic and extra-curricular record. The objective was to locate characteristics that distinguish between dropouts and non-dropouts from the data available on most students' entrance application forms.

The hypotheses to be tested were that there are no differences between dropouts and non-dropouts in:

1. College aptitude test scores
2. Achievement test scores

3. Family history data

4. High school activities

5. Rank in the high school graduation class

6. Plans for, and expectations from, college work.

The second problem of this study was to identify dropouts who returned to college within three years of their initial enrollment and to determine the characteristics which discriminate between returnees and non-returnees. The hypotheses to be tested in this portion of the study parallel those listed above.

An adjunct to the study included statements from dropouts as to why they left college. Although determining the reason for dropping out was not a basic purpose of this investigation, these data will also be reported.

Definitions. Several terms are used with specific meaning in this study and are defined as follows:

1. Dropout. Any student who officially or unofficially withdrew from the University before the end of the first semester of his freshman year was called a dropout.

2. Non-dropout. Any student who completed the first semester of his freshman year, as shown by the fact that a grade-point average was recorded for him, was called a non-dropout.

3. Returnee. Three years after the original enrollment of the freshmen class in the fall of 1961, a follow-up of the dropouts was made to see who had returned to college. A student who had completed 30 semester hours of work at an institution, or institutions, accredited by one of the regional accrediting associations, and who received grades which allowed the courses to be applied toward graduation requirements, was declared a returnee. Admittedly this is an arbitrary standard, but no definite rule is available for reaching a more precise definition.

4. Non-returnee. A student who, after dropping out of the University, had not accumulated 30 semester hours at an accredited institution, in spite of

the fact that he may have gone to various types of non-accredited schools, was called a non-returnee.

Review of Related Research. Reviews of the previous research on college dropouts have been prepared by Waller (1964) and by Summerskill (1962). These reviews, however, prove to be only advisory sources for several reasons. First of all, the criterion for dropping out of college is different from study to study. One investigator may list as dropouts all students who terminate their enrollment at the end of the first semester of the freshman year, while another may use termination at the end of the entire freshman year as the dropout criterion. Still other studies compare graduates with those who fail to graduate.

A second problem deals with the wide diversity of colleges in which the studies have been done. Some disagreement among the studies has undoubtedly been due to the lack of similarity in the student bodies involved. Some institutions attract comparatively homogeneous student bodies in terms of academic aptitude and social class; other institutions attract students from diverse social groups and with widely different aptitudes. The comparability of results of previous studies is therefore precarious unless the conditions under which they are obtained are comparable.

Several conditions, however, have with notable frequency shown themselves to be related to persistence in college in these studies. These conditions can be sorted into about three general areas: (1) academic aptitude as shown by test data and previous school records, (2) socio-economic factors such as occupation of the father, expense of going to college, and educational status of the parents, and (3) personal factors such as motivation, adjustment, interests, and clearness of educational objective.

Clearly, the general categories listed above are not exclusive, but in many instances they are overlapping. For example, it seems likely that a child from a lower socio-economic home may well have problems in adjusting to college that a child from a higher socio-economic status home would not have. Also, the research

has usually looked at a multiplicity of conditions in each report, so the above categories serve primarily as generalizations from previous work, not as categories under which studies can be classified.

At the close of this report an annotated list of selected references is provided. Therefore, only a representative portion of available research is cited below. Since many studies point to the same variables, it would be redundant to report all studies here. The effort therefore was toward accumulating a list of conditions found to be related to dropping out of college. This list then provided a basis for predicting outcomes in the present study.

Koelsche (1953) found marriage and finances a major cause of dropping out of college and found college experience lacking in the family background of dropouts. Goble (1956) found size of high school to be a significant factor, with more dropouts coming from smaller high schools. Also, more college training appeared in the family history of non-dropouts compared to that of dropouts. Distance traveled to get to college was not related to persistence, but more non-dropouts than dropouts worked to help defray expenses. Military service and marriage were important reasons for dropping out of college.

Aiken (1964) did not find aptitude to be an important variable for identifying dropouts, but he did find that conditions reflecting motivation produced important differences between dropouts and non-dropouts.

Ikenberry (1961) attempted to add a new dimension of data to the problem of looking at various psycho-social influences. He found that the behavior of dropouts was more closely related to social-background aspects than was that of non-dropouts. These data would appear to suggest an historical study of environment as a fruitful area of exploration in this problem.

A series of reports has been published by Eckland (1964, 1964, 1964) and by Eckland and Smith (1963). Significant findings of these reports are that students often returned to do additional college work after once dropping out (over half of the dropouts at the University of Illinois graduated within ten

years); that lack of goals, going into military service, and problems of personal adjustment were often given as reasons for dropping out by students who will return to college; and that marriage, lack of interest, and job opportunity were given by non-returnees as reasons for dropping out. Batts (1957), like Eckland, found a sizable portion of the dropouts returning to college within the seven-year span of his study. Eckland also pointed out that some student bodies are too homogeneous in student characteristics to yield good differentiation between dropouts and non-dropouts.

High school achievement was mentioned by several investigators as an indicator of college dropout. Munger (1956) pointed out, however, that it is academic aspiration based on high school work that is the important variable. Students whose aspirations were greater than achievement often dropped out. Waller (1964) suggested that unfulfilled expectations in many areas of the college scene lead to a student's withdrawal.

Slater (1960) found that well defined goals increased persistence in college and that apparently support of these goals by the family increased persistence even more, since students who were in programs related to their parents' occupations were more persistent than students who were not. This conclusion is supported by Greenfield (1964) and Yoshino (1958).

Some of Iffert's studies (1955, 1956, 1958) also supported the conclusion that clearness of goals promotes persistence. Also, Iffert pointed out that military service, academic problems, and financial problems appeared to dominate the reported causes for dropping out. Dissatisfaction with situations in college did not seem to be the reason for withdrawal; rather, the important element was one's ability to endure dissatisfaction. Iffert's study, however, was unfortunately timed, since it occurred during the Korean war mobilization.

Test scores and rank in high school class have been further studied as indicators of college persistence by Yoshino (1958), Johnson (1954), and Gikoski and Schwartz (1961). Yoshino found test scores and high school

performance to be significantly related to college tenure, and Gikoski and Schwartz supported these findings. Johnson, however, found no differences in test data between male dropouts and male non-dropouts, although women dropouts were less capable readers than women non-dropouts.

Gikoski and Schwartz, Yoshino, and Cummings (1949) all reported reasons for dropping out of college. These studies pointed to a lack of clear goals in personal and vocational areas as the basic cause for leaving college work. This fact, in conjunction with Eckland and Smith's (1963) findings, suggests that as goals become stabilized, some dropouts will return to do additional college work and may even complete a degree program. If this be true, the college may prevent this loss of time for the dropout by providing a more extensive orientation service.

The personality area was directly approached by Heilbrun (1965) who used an adjective check list to compare dropouts with non-dropouts. He found that the persistent student was more conforming and task-oriented, although this generalization was true for the upper ability levels only.

In summary, this sampling of studies seems to indicate that several kinds of data provide worthwhile bases for exploring the dropout problem. Test scores and high school rank, personal history, and personality characteristics have been cited as relevant variables. The evidence is far from conclusive, however. Further, these studies on the whole deal with students who have spent at least one semester, and often more, on the college scene. What of the student who leaves college without receiving the feedback of his first official grade report?

The research has concentrated on characterizing the dropout. Who are the people who drop out and then return to continue college work, and how are they different from those who do not return to the academic scene?

Although the differences in the composition of the student bodies represented in the above reports, as well as the differences in the criterion of dropping out, restrict generalization of the results of previous studies, these

investigations have been fruitful in identifying variables which may be applied to further investigation. Therefore the present study selected types of variables shown by previous research to be related to persistence in college, and these variables were employed to illustrate differences between (1) students who dropped out before completing their first semester's work and those who completed theirs, and (2) students who dropped out, but returned to college and those who did not return.

Procedure. Upon enrolling at Indiana University, the freshman class of 1961 took a battery of tests and also completed a personal history questionnaire. These tests were the CEEB Scholastic Aptitude Test (SAT), The American College Testing Program (ACT), the Cooperative English Test, C2, (Reading Comprehension Level and Vocabulary), The Multiple Aptitude Tests (Arithmetic Reasoning and Applied Science and Mechanics), and the Sequential Tests of Educational Progress-Writing. The class was divided into two groups of about 1,500 each; one group took the SAT while the other group took the ACT. The remaining tests were taken by all students.

The personal history questionnaire reported age, sex, father's occupational classification, father's and mother's educational level, number of brothers and number of sisters, number of siblings older and number younger, in-state or out-of-state residence, size of graduating class in high school, rank in the graduating class in fourths, kind of high school extracurricular activities participated in, offices held in high school, planned college major, plans for graduate work, and anticipated problems in college. The questionnaire was administered by a qualified test administrator who went through the items, one by one, with the group so as to decrease the possibility of misunderstanding of any item.

This study began three years after the collection of the above data. Students' records were then investigated to sort out those 1961 freshmen who had left the University during their initial semester. Then each of these people was contacted by means of a simple questionnaire (see Appendix) to find out

(1) the institutions, if any, in which he may have enrolled since leaving Indiana University, and the number of college credits successfully completed, and (2) the reasons he reported for leaving the University in the first place.

Upon receipt of the completed questionnaire, the investigator sent a letter to the listed colleges and schools requesting a statement of the number of credits accumulated by the reporting student. The data received from the institution were used as a basis for identifying returnees and non-returnees.

To this point, then, the 1961 freshman class at Indiana University had been divided into dropouts and non-dropouts. The dropouts had been further classified as returnees and non-returnees. The test and personal history data were then analyzed to identify differences between the dropouts and non-dropouts, and between returnees and non-returnees. Standard t-tests were used for analyzing test score differences, while chi-square was applied to the personal history data.

The Subjects. Ninety students enrolled as freshmen in the fall of 1961 and dropped out before the end of the first semester. Of these, 15 had not completed the basic testing program, and, as a result, the necessary information was not available for them. The first analysis was therefore based on 75 dropouts who had complete data. In this group there were 41 males, 34 females. These students were compared with the 2,875 freshmen with complete data who did finish their first semester's work. Here there were 1,386 males and 1,489 females.

The Dropouts

Test Results. As noted, all freshmen in the study took either the ACT or SAT at the time of entry at the University. In addition, a battery of five achievement tests was also given. Since the number of cases in the dropout group was not large, it was decided to convert all ACT scores to SAT total scores, so that the same data would be available on all subjects. This was done by means of a table of concordance previously devised.* Thus, the test score

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*Chase, Clinton I., and Barritt, L. Spencer, "A Table of Concordance between ACT and SAT," Journal of College Student Personnel, in press.

analysis was based on SAT total scores and the five achievement test scores.

The initial analysis was made between the SAT total scores for the drop-out group and the non-dropouts who had taken the SAT (about half of the non-dropouts had ACT scores). The results were clearly significant, as shown in Table 1. It must be noted, however, that a fair amount of overlap exists between the two groups. The difference between the means of the dropouts and non-dropouts was 109 points, an amount which is only about two-thirds of a standard deviation on the scale of either group. A considerable portion of the two groups could therefore be matched on SAT total scores. On the whole the non-dropouts clearly ranked higher than the dropouts; however, because of the overlap involved, it is believed that this condition alone cannot be used to explain the withdrawal of many of the students who left before the end of their first semester of college work.

TABLE 1. DESCRIPTIVE DATA AND t-VALUES FOR TEST SCORES FOR DROPOUTS AND NON-DROPOUTS

Test	Group	N	$\bar{X}$	S	t
A. Sci. & Mech.	Non-Dropouts	2898	50.25	9.48	4.80**
	Dropouts	75	44.92	24.66	
Arithmetic	Non-Dropouts	2898	52.84	9.72	3.87**
	Dropouts	75	48.44	22.78	
Vocabulary	Non-Dropouts	2898	52.38	9.29	10.77**
	Dropouts	75	40.68	19.66	
Level of Compreh.	Non-Dropouts	2898	52.00	9.2	9.96**
	Dropouts	75	41.28	21.06	
Eng. Usage	Non-Dropouts	2898	52.53	9.02	8.99**
	Dropouts	75	43.05	20.67	
SAT-Sum	Non-Dropouts	1467	908.15	178.91	5.14**
	Dropouts	75	799.23	170.41	

**Significant at .01 level.

As shown in Table 1 the results of the achievement tests essentially parallel the SAT data. The dropout group on all tests was significantly lower than the non-dropouts. An exception, however, appears in the spread of scores in the two groups. The dropout group, as shown by the standard deviations, was somewhat more heterogeneous than the non-dropouts. This spread of ability once more suggests that some fair amount of overlap exists in the abilities of individuals in the two groups. This is probably most true for the science and mathematics areas where the difference between means is somewhat less than are those of the reading and the writing test results. In general, however, the dropouts are significantly less well equipped in the academic skills than are the non-dropouts.

In summary, it appears that the dropout group as a whole showed less college aptitude and lower general achievement than the non-dropout group, but the extent of overlap between score distributions of dropouts and non-dropouts is sufficient to suggest that something more than test measured characteristics contributes to dropping out of college. Additional characteristics, therefore, are investigated below.

Personal History. Besides test scores a considerable amount of personal data was collected on the students. Table 2 presents an overview of the results of chi-square tests on these personal history data. Seven of the 17 conditions discriminated between dropouts and non-dropouts. Each of these seven conditions was explored in greater detail.

TABLE 2. SIGNIFICANCE OF DIFFERENCES IN PERSONAL HISTORY BETWEEN DROPOUTS AND NON-DROPOUTS

Characteristic	Significance Level
Age	.02
Sex	N.S.
Father's education	.01
Mother's education	.01
Number of brothers	N.S.
Number of sisters	N.S.
Number of older siblings	N.S.
Number of younger siblings	.05
In-state - Out-of-state	N.S.
Number in graduating class	N.S.
Rank in high school class	.01
Father's occupation	N.S.
Extracurricular activities	.01
Offices held in high school	N.S.
Plans for graduate training	N.S.
Problems anticipated	.01*
Planned college major	N.S.

*Only problems checked 5 or more times were analyzed. Each problem was analyzed separately, since students were allowed to check as many problems as they wished. Only study habits was checked significantly more often by dropouts than non-dropouts.

1. Age. The analysis of differences in the ages of dropouts and non-dropouts reveals that the dropouts are disproportionately represented in the higher age groups (20 years and more). The data in Table 3 show that approximately 11 per cent of the dropout group were 20 years of age or older, whereas only 3.5 per cent of the non-dropouts appeared in this category. The factor of age appears, therefore, to be a significant one because of the proportionate over-representation of dropouts among the "older" freshmen.

TABLE 3. CHI SQUARE ANALYSIS COMPARING DROPOUTS AND NON-DROPOUTS ON AGE
A = Actual Count, E = Expected Frequency, V = $(A-E)^2/E$

Age		Dropouts	Non-Dropouts
17 and less	A	3.00	133.00
	E	3.45	132.55
	V	.059	.002
18	A	47.00	1984.00
	E	51.57	1979.43
	V	.404	.011
19	A	17.00	661.00
	E	17.21	660.79
	V	.003	.000
20 and over	A	8.00	101.00
	E	27.67	106.23
	V	14.329	.257
		χ^2	= 15.065**

**Significant at .02 level.

2. Father's education. As shown in Table 4, the fathers of dropouts are disproportionately represented among the lower educational groups. Some 69 per cent of the dropouts had fathers who had a high school education or less, whereas 50 per cent of the non-dropouts had fathers in this category. This appears to be the category that makes father's education a significant discriminator. Other categories of father's education contributed little to the significance of the findings.

TABLE 4. CHI SQUARE COMPARISON OF DROPOUTS AND NON-DROPOUTS ON FATHER'S EDUCATIONAL LEVEL A = Actual Count, E = Expected Count, V = $(A-E)^2/E$

Educational Level		Dropouts	Non-Dropouts
Less than high school	A	23.00	547.00
	E	14.50	555.50
	V	4.981	.130
High school graduate	A	29.00	874.00
	E	22.97	880.03
	V	1.581	.041
Some college	A	9.00	599.00
	E	15.47	592.53
	V	2.705	.071
College graduate or more	A	14.00	853.00
	E	22.06	844.94
	V	2.943	.077
		χ^2 = 12.528**	

**Significant at .01 level.

At first glance this fact may suggest an economic factor as the reason for the student's dropping out; however, as Table 2 shows, the father's occupational level was not a significant discriminator. Although education and occupation are correlated, the relationship is far from perfect. But this does not eliminate the economic element. A range of income exists within any occupational level, so occupation is not necessarily a good indicator of either the economic or the cultural level of the family.

TABLE 5. CHI SQUARE COMPARISON OF DROPOUTS AND NON-DROPOUTS ON MOTHER'S EDUCATION A = Actual Count, E = Expected Count, V = $(A-E)^2/E$

Educational Level		Dropouts	Non-Dropouts
Less than high school	A	21.00	449.00
	E	11.96	458.04
	V	6.839	.179
High school graduate	A	37.00	1310.00
	E	34.27	1312.73
	V	.218	.006
Some college	A	9.00	604.00
	E	15.00	597.41
	V	2.789	.073
College graduate or more	A	8.00	510.00
	E	13.18	504.82
	V	2.035	.053
		χ^2 = 12.190**	

**Significant at .01 level.

3. Mother's education. The mother's educational level was among the conditions which were quite significantly related to the persistence of the student in college. Table 5 shows the mothers of dropouts to be proportionately over-represented in the less-than-high-school group, and under-represented in the college group. It appears that, if neither mother nor father has attended college, the likelihood of finding the offspring among the dropout group is greater. Does this suggest a different type of orientation program for students whose parents have not gone to college compared to that for students whose parents have?

TABLE 6. CHI SQUARE COMPARISON OF DROPOUTS AND NON-DROPOUTS ON NUMBER OF YOUNGER SIBLINGS A = Actual Count, E = Expected Count, V = $(A-E)^2/E$

Younger Siblings		Dropouts	Non-Dropouts
None	A	41.00	1251.00
	E	32.77	1259.23
	V	2.067	.054
One	A	21.00	877.00
	E	22.78	875.22
	V	.139	.004
Two	A	4.00	465.00
	E	11.90	457.10
	V	5.241	.136
Three or more	A	9.00	289.00
	E	7.56	290.44
	V	.275	.007

$\chi^2 = 7.922^{**}$

**Significant at .01 level.

4. Number of younger siblings. It would seem logical that the greater the number of younger siblings one has, the greater will be the strain of college expenses on the family budget. However, the data in Table 6 do not entirely support this contention. The significant chi-square arises from the categories of no younger siblings--where dropouts are proportionately over-represented, and two younger siblings--where dropouts are proportionately under-represented. These data appear to be quite different from the logical analysis of family dynamics, and are not quickly rationalized. Possibly the only child and the youngest child would find it difficult to make an adjustment away from home, but this does not account for the significance of the category of two younger siblings.

TABLE 7. CHI SQUARE COMPARISON OF DROPOUTS AND NON-DROPOUTS ON RANK IN THE HIGH SCHOOL CLASS A = Actual Count, E = Expected Count, $V = (A-E)^2/E$

Rank		Dropouts	Non-Dropouts
Upper 10%	A	10.00	920.00
	E	23.08	906.92
	V	7.410	.189
Upper Fourth, Below Upper 10%	A	19.00	810.00
	E	20.57	808.43
	V	.120	.003
Second Fourth of Class	A	28.00	723.00
	E	18.64	732.37
	V	4.707	.120
Third Fourth of Class	A	13.00	353.00
	E	9.08	356.92
	V	1.691	.043
Lowest Fourth	A	3.00	63.00
	E	1.64	64.36
	V	1.133	.029
		$\chi^2 = 15.444$**	

** Significant at .01 level.

5. Rank in the high school graduating class. As shown in Table 7 the dropouts were proportionately under-represented in the upper 10 per cent of the high school class, and tended to be slightly, although only very slightly, over-represented in the lower half of the class. The significant feature, however, is the upper 10 per cent category where about 14 per cent of the dropouts appeared in contrast to 32 per cent of the non-dropout group.

TABLE 8. CHI SQUARE COMPARISON OF DROPOUTS AND NON-DROPOUTS ON EXTRACURRICULAR ACTIVITIES A = Actual Count, E = Expected Count, $V = (A-E)^2/E$

Activities		Dropouts	Non-Dropouts
Student Government Only	A	2.00	42.00
	E	1.12	42.88
	V	.689	.018
Academic Clubs Only	A	2.00	151.00
	E	3.90	149.10
	V	.924	.024
Non-Government - Non Academic Only	A	24.00	654.00
	E	17.27	660.73
	V	2.620	.069
All of above	A	8.00	734.00
	E	18.90	723.10
	V	6.239	.164
Government and Academic Only	A	4.00	38.00
	E	1.07	40.93
	V	8.024	.210
Government and Non-Academic Only	A	13.00	355.00
	E	9.38	358.63
	V	1.402	.037
Academic and Non Academic - Non Government Only	A	20.00	800.00
	E	20.89	799.11
	V	.038	.001
No Participation	A	2.00	95.00
	E	2.47	94.53
	V	.090	.002

$\chi^2 = 20.600^{**}$

** Significant at .01 level.

6. Extracurricular activities. The high school activities were listed in categories on the student questionnaire and the student was asked to check the one category which applied to him. The wide variety of extracurricular activities, as well as the lack of uniformity in extracurricular activities among high schools, indicated that specific organizations could not be listed. However, general types of organizations, and combinations of these types, were sufficiently common to be used as categories.

Table 8 shows the analysis of the students' activities in high school. It should be noted at the outset that the frequencies in several categories were rather small for the dropout group, detracting from the confidence that can be placed in these results. Categories could be compressed, but not without obscuring what appeared to be important differences between categories. Therefore, it was decided to proceed, but with clear caution, with the arrangement in Table 8 in spite of the small cells.

TABLE 9. PROBLEMS ANTICIPATED BY DROPOUTS AND NON-DROPOUTS

Problem	Number of Non-Dropouts	Number of Dropouts	Chi Square
Choice of vocation	338	11	N.S.
Emotional problems	158	10	N.S.
Study habits	730	49	6.776**
Dating	49	5	N.S.
Money	203	9	N.S.

**Significant at .01 level.

The dropout appeared to be disproportionately over-represented in activities other than student government and academic clubs and he was clearly under-represented among students who participated in all kinds of activities--government, academic clubs, and non-academic clubs. The category of government and academic clubs stands large in the analysis, however the small frequency makes its reliability doubtful. It appears that the high school spare-time interests of the college freshman dropouts centered around the non-government, non academic organizations and they tended to be in fewer kinds of clubs than the non-dropouts. These findings seem to suggest that the dropout is not in the main stream of the dynamics of high school, being involved in neither agencies of control nor organizations designed to promote the academic endeavors of the school.

Dropouts and non-dropouts were also compared on the basis of problems they anticipated in college. Since 12 items were listed on the questionnaire under the heading of anticipated difficulty, the likelihood of getting sufficiently

large numbers of dropouts in each of the 12 items was remote. Therefore, it was decided to analyze each item separately, but to include only those items that were checked a minimum of five times by the dropout group. This resulted in an analysis of five of the 12 items. The results of this analysis are reported in Table 9.

The only problem which was anticipated significantly more often by dropouts was study habits. However, both groups selected it more often than any other of the 12 problems listed.

Summary of Dropouts. The dropout group, compared to the non-dropout group, appears to be characterized by the following conditions: they were overpopulated with older students (20 years or older); they had an excess of both fathers and mothers from the lower educational levels; more often than expected they had either no younger siblings or two younger siblings; they were underrepresented in the highest 10 per cent of their high school class; they were overrepresented in non-student government, non-academic types of extracurricular activities; and they scored lower than non-dropouts on tests of academic aptitude and achievement.

Combining the various conditions noted above, one may come to a conclusion as to the nature of the dropout group. As a whole the things that distinguish them from those students who did not drop out reflect a general lack of displayed involvement in academic affairs either at home or in the school. This condition for at least a portion of the dropouts appears to be consonant with their academic abilities. It is further interesting to note that these traits seem to pervade student groups from larger and smaller high schools alike and are characteristic of students regardless of planned college major.

The Returnees

An important aspect of the study of dropouts is that of locating the number of people who return to college once they have left. Previous research

has suggested that a sizable portion of dropouts will return to finish their work. Since the present study deals with a different segment of the dropout population than has been reported by other studies, the returning segment here may vary markedly from those reported in other studies.

Of the 75 students who dropped out, 50 responded to the questionnaire sent to them. This constitutes a 66 per cent response, which is believed to be quite satisfactory considering that a three-year period had elapsed between the time that the students left the University and the time the questionnaires were mailed.

TABLE 10. DISTRIBUTION OF SEMESTER HOURS EARNED BY STUDENTS WITHIN THREE YEARS AFTER DROPPING OUT OF COLLEGE

Semester hours	N
100-109	1
90-99	1
80-89	3
60-69	2
50-59	4
40-49	2
30-39	3
20-29	2
10-19	4
0-9	23
Total	50

The data from the 50 persons who responded to the questionnaire were analyzed in the same manner as was done before; however, this time the purpose was to identify differences between returnees and non-returnees.

Of the 50 dropouts who responded to the questionnaire, 16--or 32 per cent--were returnees. Table 10 shows the numbers of semester credit hours earned by the dropout group at accredited institutions.

Because of the small number of cases involved in analyzing the returnee-non-returnee data, categories previously used to look at dropouts and non-dropouts were combined to create coll frequencies which permitted analysis. The general results of the analysis of differences between returnees and non-returnees is recorded in Tables 11 and 12. With only one of seven variables

showing difference (Table 11) one wonders if this is not a chance result. Apparently neither the personal and scholastic history nor the test data collected in this study discriminated between returnees and non-returnees.

The fact that only a third of the students returned to college does not, however, mean that the rest were lost to the unskilled labor market. Of the dropouts who responded to the questionnaire several had attended trade and technical schools, and presumably were taking their place in the world of skilled trades. The purpose of this study, however, was to investigate only the dropouts who returned to college.

TABLE 11. DESCRIPTIVE DATA AND t-VALUES FOR TEST SCORES FOR RETURNEES AND NON-RETURNEES

Variable	Group	N	$\bar{X}$	S	t
High School Rank	Returnee	16	3.88	2.30	1.19
	Non-Returnee	34	3.00	2.23	
A. Sci. & Mech.	Returnee	16	41.69	27.59	.18
	Non-Returnee	34	43.06	23.44	
Arithmetic	Returnee	16	50.25	28.70	.43
	Non-Returnee	34	47.00	23.11	
Vocabulary	Returnee	16	43.81	14.41	.86
	Non-Returnee	34	38.77	21.22	
Level of Comp.	Returnee	16	50.56	19.95	2.53*
	Non-Returnee	34	35.85	18.83	
Eng. Usage	Returnee	16	43.56	26.59	.17
	Non-Returnee	34	42.44	20.00	
SAT-Sum	Returnee	16	817.88	161.42	.60
	Non-Returnee	34	784.06	195.89	

*Significant at .05 level.

TABLE 12. PERSONAL HISTORY ITEMS COMPARING RETURNEES WITH NON-RETURNEES

Characteristic	Significance Level
Age	N.S.
Sex	N.S.
Father's education	N.S.
Mother's education	N.S.
Number of brothers	N.S.
Number of sisters	N.S.
Number of older siblings	N.S.
Number of younger siblings	N.S.
In state - out of state	N.S.
Number in high school class	N.S.
Rank in high school class	N.S.
Father's occupation	N.S.
Plans for post graduate work	N.S.
Planned major	N.S.

Reasons for Dropping Out. Besides requesting information about academic activities, the questionnaire also listed six conditions that previous research had often mentioned as reasons for dropping out of college. The student was asked to check as few or as many as he felt were appropriate to his case, but he was asked to place a "1" in the blank before the most important reason, a "2" before the next most important, etc. These reasons were health, financial, unclear vocational objectives, grades less than expected, personal adjustment to college, and lack of desired curriculum (see Appendix).

TABLE 13. CONDITIONS CHECKED BY 50 COLLEGE DROPOUTS (16 returnees, 34 non-returnees) AS CONTRIBUTING TO THEIR WITHDRAWAL FROM THE UNIVERSITY

Importance Rank of Each Condition		Returnees		Non-Returnees		Total	
		Number	Per Cent	Number	Per Cent	Number	Per Cent
Health	1	2		8		10	
	2	1		1		2	
	3	0		0		0	
	Total	3	18.6	9	26.5	12	24.0
Financial	1	0		3		3	
	2	0		1		1	
	3	2		4		6	
	Total	2	12.5	8	23.5	10	20.0
Unclear Vocational Goals	1	2		2		4	
	2	2		8		10	
	3	0		2		2	
	Total	4	25.0	12	34.3	16	32.0
Grades below Expectation	1	2		1		3	
	2	0		4		4	
	3	1		1		2	
	Total	3	18.6	6	17.6	9	18.0
Personal Adjustment	1	5		13		18	
	2	4		2		6	
	3	0		2		2	
	Total	9	56.2	17	50	26	52
Curriculum Inappropriate	1	0		2		2	
	2	1		0		1	
	3	0		0		0	
	Total	1	6.3	2	5.9	3	6

The condition most often checked as contributing to dropping out was adjustment to college. Twenty-six of the 50 respondents (52 per cent) marked this item. Nine (56.2 per cent) of the 16 returnees and 17 (50 per cent) of the 34 non-returnees had checked this item. Little difference appeared between returnees and non-returnees on this item, although non-returnees seemed to place it first in importance whereas returnees placed it first or second. It is interesting to note that so large a group of the respondents (52 per cent) checked adjustment as having something to do with their dropping out, indicating that this factor played

a large role, at least in the minds of the dropouts, in the decision to withdraw. However, one wonders what portion of the non-dropouts also had adjustment problems in their initial semester in college.

The second most significant condition related to withdrawing from the University was the uncertainty of vocational goals. Although it did not weigh heavily as a primary reason, apparently it contributed with some regularity to a decision to leave school. Among the dropouts, 32 per cent said uncertainty of vocational goals was of some relevance to their withdrawing from the University. However, it appeared to be less of a problem for returnees than for non-returnees.

Following vocational goals, the most frequently checked item was health. This was more common for non-returnees, however. The nature of the health problem was not investigated. Presumably chronic conditions that caused a student to withdraw would also keep that student from re-entering college. Since the majority of the group who checked health as the primary dropout cause did not return to college, it is hypothesized that the physical conditions of these students may have been of a lasting nature. However, health may have been a rationalization for other deficiencies.

The remaining conditions--financial, grades below expectation, and unsatisfactory curriculum--did not appear to be of appreciable significance as reasons for dropping out.

Finances were reported more often for non-returnees than for returnees, but this again may have been a rationalization in that other evidence has indicated that more non-dropouts than dropouts partially support themselves.

Grades were not expected to appear important, since the students in this study left college with at most only a few class examinations as feedback on their achievement. However, the results of test scores, as noted earlier, may well have indicated that students who drop out were not likely to be among the highest ranking academically. Unsatisfactory curriculum appeared to be an unimportant reason for withdrawal.

The above findings are not entirely consistent with previous research, but since the criterion of dropping out is not the same as that used in other studies, this may not be surprising. Eckland and Smith (1963) found that students who listed uncertain goals or personal adjustment as reasons for dropping out were the ones who were most likely to return. This conclusion cannot be made from the data in the present study. Also, Munger (1956) found that grades below expectations were an important cause for dropping out; however, the present study does not confirm this conclusion either.

On the questionnaire returned by the dropouts was an open-ended statement which said, "I would not have withdrawn in the fall of 1961 if _____ _____." Although not all responses can be categorized precisely, several kinds of comments seemed sufficiently common to note them.

Six girls reported that they planned to be married and withdrew for this purpose. Several students said that they wanted more personal attention from the faculty and from counselors. The problem of being a number among large groups of students, of having neither identity nor privacy, was mentioned in essence by several respondents. Still others felt the expense of college away from home as an imposition on their family.

Predicting the Dropout. If measurement data show differences between dropouts and non-dropouts, it should be possible to predict with some degree of accuracy a student's withdrawal. Therefore a discriminant analysis was done, using the high school rank and the Scholastic Aptitude Test total score as the predictor variables. The computation was based on the 75 dropouts and 200 non-dropouts randomly drawn from those who had SAT scores. The resulting analysis produces the following function. D score = -.00041 x HSR + .00001 x SAT
If a cutting point is established between a D score of .00856 and .00855, 64 per cent of the non-dropouts and 60 per cent of the dropouts are identified correctly. These portions are substantial, but less than impressive. The addition of other

variables did not appreciably improve the predictability of withdrawals, however. In deference to parsimony the analysis which utilized SAT and high school rank was retained, although its results cannot be more than advisory at best.

Since differences between returnees and non-returnees were lacking, no discriminant analysis was applied to the data from these two groups. Such an analysis would have been of doubtful value as a guide to predicting a return to college work, and therefore it was not completed.

Summary

This study investigated conditions which would indicate differences between students who withdraw before the end of their first semester in college and students who did not withdraw, and noted differences between students who withdrew but later returned, and students who did not return to college. The basic data were scholastic aptitude and achievement test scores and personal history accounts.

The analysis of test data showed the dropouts to have significantly lower scores than the non-dropouts; however, the overlap between groups was sufficient to suggest that something more than the abilities measured by tests might be related to dropping out of college.

The personal history data showed differences between dropouts and non-dropouts in seven areas. Older students (20 years of age or over) were conspicuous among the dropouts; the educational levels of both fathers and mothers were lower among dropouts than among non-dropouts; dropouts proportionately more often had no younger siblings or two younger siblings; dropouts were proportionately lacking in the upper 10 per cent of their high school class; and they were also absent from high school student government and academic organizations. They also anticipated problems with study habits in college.

In summary, it appears that the dropout was most likely to be a person who has lived in an environment of minimum academic involvement. He likely has found this limited involvement siutable, because it was commensurate with the

typical aptitude characteristic of the dropout group. The dropout showed little evidence of assertiveness or initiative in academic affairs. Instead he appeared to be a passive actor on the academic scene, needing support and direction.

The second aspect of the study was to identify differences between dropouts who return and those who did not return to college. The analysis of both test data and personal history items indicated no important differences between these two groups. Apparently this kind of data divulges little that could be used to identify the dropout who will return to college, at least within a three-year period after the original enrollment.

Adjustment to college life was mentioned most often as a condition contributing to withdrawal, and subjective comments submitted by the respondents suggested that a lack of personal attention was a condition associated with their poor adjustment. Lack of clear vocational goals was mentioned next most often after adjustment. These are conditions that might have been dealt with by university student personnel services, if the dropouts had sought aid from them.

It therefore appears that the person who is most likely to leave the university scene without finishing his initial semester's work, besides being one who does not bring with him high academic aptitude and who has come from a history of minimal involvement in academic affairs, does not find in the university setting sufficient individual support to make the transition from high school to the demanding environment of college. His lack of academic skills, which might have been acquired by a more rigorous involvement in high school programs, has left him poorly equipped to adapt to the ever-greater requirements of the academic community on the college campus. Without these skills, and without being abundantly endowed with the ability quickly to acquire them, the dropout makes a poor adjustment to the academic environment, thus decides to withdraw.

Prediction of dropping out, based on test data and high school rank, is only of fair success, as revealed by a discriminant analysis. Prediction of returning to college from the data available in this study does not appear to be likely.

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4. Cummings, Edgar C., "Causes of Student Withdrawals at DePauw University," School and Society, 70: 152-53, September 1949.

Interviewed dropouts from all classes, freshman through senior. Found causes to be scholarship too low, change of curricular interests, finances, desire to be nearer home, marriage, wanted different type of college, dissatisfactions and maladjustments to college, health.

5. a. Eckland, Bruce K., "Social Class and College Graduation: Some Misconceptions Corrected," American Journal of Sociology, 70: 36-50, July 1964.

The homogeneity of the many student bodies studied seem to be a reason that low correlations between social class and performance in college. It does appear to have an effect, but not much. Prior studies which related college performance to social-class characteristics generally find that parents' education had a positive relationship to students' performance.

5. b. Eckland, Bruce K., "College Dropouts Who Came Back," Harvard Educational Review, 34: 402-420, Summer 1964.

A ten year follow up with a 94% return from 1,332 males from the 1952 freshman class of the University of Illinois. Of 1,180 respondents 500 graduated on time, 594 dropped out, 417 came back (70%), 229 (55%) graduated within the 10 years, 69% total graduation rate. Eight semesters in 4 years is not the normal progression to graduation. A fourth had been gone 4 years or more before returning and half had been less than 2 years removed from school, but this had no difference on their rate of success. However, the amount of college that they had had before they withdrew was positively correlated with their future success. Note above articles by Eckland for other details.

5. c. Eckland, Bruce K., "A Source of Error in College Attrition Studies," Sociology of Education, 38: 60-72, Fall 1964.

When we examine more closely the "dropouts" we find that more dropouts return to college and eventually graduate than has been previously estimated. About 50% of the students who will graduate will do so on time, and dropouts who later graduated were almost 20%. There are 2 types of "autopsy" studies. The exit interview which is not very useful and the self-report questionnaire given at some later date. However, the reasons given for leaving college seem to be unstable. Students who claimed to have quit for lack of goals, military service, or personal adjustment problems were quite likely to attain a degree later; if they left for marriage, lack of interest, or job opportunity they were not apt to return. Academic and financial problems, often cited as reasons for leaving, did not seem to make any difference on "staying power." Half reporting these reasons graduated eventually. The association of several independent variables with attrition is not stable.

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Found that 45% of all graduates in contrast to 32% of the matched dropout group, came from high school graduating classes of 200+. Education of parents beyond high school showed that 64% of graduates studied, as contrasted to 42% of the dropouts, had one or both parents who had attended college. The effect of distance from home on persistence did not produce a significant difference. More graduates than dropout, 41% as compared with 26% needed to work to pay part of their college expenses. Military service for men and marriage for women reported most frequently as reasons for withdrawal.

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APPENDIX

Name_____

THE BRIEF INFORMATION WE NEED

A. Since you left Indiana University in the fall of 1961 have you continued your formal education in any type of institution that provides training beyond the high school level? _____ yes _____ no

a) If your answer to A was yes,

1. What was the name(s) of the institution(s) and how many credit hours had you successfully completed there as of September 1, 1964?

Name of School	Location	Credit hours semester	Credit hours quarter

b) Are you currently enrolled in college level course work? _____ yes _____ no

1. If yes, list name and location of institution.
School_____Location_____

B. In order to help students avoid the problems that you faced in the fall of 1961, we must identify these problems. Therefore, we would like to know the reasons you left Indiana University in the fall of 1961.

a) Write a 1 in front of the most important condition that led to your withdrawal from school, 2 in front of the next most serious, etc. Mark as many or as as few of these items as are appropriate.

_____ health problems interfered
_____ financial problems too great
_____ unsure of vocational objective
_____ grades were below expectations
_____ personal adjustment to college life was unsatisfactory
_____ the University did not provide the curriculum I wanted
_____ other (please state)_____

b) I would not have withdrawn in the fall of 1961 if_____

_____

WHEN COMPLETED, ENCLOSE IN ATTACHED ENVELOPE AND MAIL.